

Health Care Innovation Initiative

# **Executive Summary**

Acute Diabetes Exacerbation Episode Corresponds with DBR and Configuration file V1.0

## **OVERVIEW OF AN ACUTE DIABETES EXACERBATION EPISODE**

The acute diabetes exacerbation episode revolves around patients who are diagnosed with an acute diabetes exacerbation, which includes diabetic ketoacidosis (DKA) and hyperosmolar hyperglycemic state (HHS). The trigger event is an inpatient admission or observation claim where the primary diagnosis is one of the defined DKA or HHS trigger codes. In addition, an inpatient admission or observation claim where the primary diagnosis is one of the defined Type I, Type II, secondary, or gestational diabetes trigger codes and the secondary diagnosis is one of the defined DKA or HHS codes is also a potential trigger event. The encounter can take place in an inpatient setting, as an admission or under observation status.

All related care – such as specific imaging and testing, and specific medications – is included in the episode. The quarterback, also called the principal accountable provider or PAP, is the facility where the patient was ultimately treated. The acute diabetes exacerbation episode begins on the day of the triggering hospitalization and ends 30 days after discharge.

## **CAPTURING SOURCES OF VALUE**

Providers have multiple opportunities during an acute diabetes exacerbation episode to improve the quality and cost of care. Important sources of value include the appropriate use of imaging and testing and the reduction of unnecessary readmissions. Additionally, based on the patient's clinical status and diagnosis, providers can select an appropriate site of care and duration of treatment, as well as reduce complications such as repeat exacerbations.

## *Illustrative Patient Journey*

1 Patient with diabetes develops symptoms of diabetes exacerbation

2 Initial assessment Emergency department, inpatient hospital

- Patient undergoes rapid initial evaluation, including physical examination and screening
- Patient may undergo lab tests, including serum glucose and urinalysis
- Patient is appropriately triaged, diagnosed, and receives early stabilization and treatment

3 Treatment

Inpatient hospital

- Patient is stabilized and treated with IV fluids which typically include saline, potassium chloride, and lowdose insulin
- Patient will likely receive frequent clinical monitoring, including regular laboratory testing
- Patient may undergo further diagnostic testing to identify the precipitating event
- Patient is treated for the underlying precipitating event
- Patient is converted to subcutaneous insulin
- Patient undergoes education on insulin use and glycemic control

→ All episodes

■→ May not be experienced by all patients

4 Follow-up care
Outpatient hospital, office, or

 Patient may have a followup visit with primary care doctor or endocrinologist

emergency department (ED)

- Patient may receive additional counseling on diabetes management
- Patient may receive followup related to the precipitating event
- Primary glycemic control strategy may be modified

5 Potential complications
Outpatient hospital, office, ED,
or inpatient

- Repeat exacerbation
- Hypoglycemia
- Hypokalemia
- Cerebral edema

## Potential Sources of Value



## ASSIGNING ACCOUNTABILITY

The quarterback of the episode is the specific health care provider deemed to have the greatest accountability for the quality and cost of care for the patient. To state it differently, the quarterback is the provider who has the greatest ability to influence all of the health care delivered in a given episode. For the acute diabetes exacerbation episode, the quarterback is the facility where the patient was ultimately treated. The contracting entity of the facility where the acute diabetes exacerbation is ultimately treated will be used to identify the quarterback.

## MAKING FAIR COMPARISONS

The episode model is designed to be fair to providers and incentivize best practices without penalizing providers who care for sicker patients. As such, important aspects of the model are:

- Inclusion of only the cost of services and medications that are related to the acute diabetes exacerbation in calculation of episode spend.
- Exclusion of episodes when clinical circumstances create the likelihood that the case will deviate substantially from the typical care path or when claims data is likely to be incomplete.
- Risk adjusting episode spend to account for the cost of more complicated patients.

The acute diabetes exacerbation episode has no pre-trigger window. During the trigger window, all services and relevant medications are included. The post-trigger window includes specific care after discharge, specific imaging and testing, and specific medications.

Some exclusions apply to any type of episode, i.e., are not specific to an acute diabetes exacerbation episode. For example, an episode would be excluded if more than one payer was involved in a single episode of care, if the patient was not continuously insured by the payer during the duration of the episode, or if the patient had a discharge status of 'left against medical advice'. Examples of exclusion criteria specific to the acute diabetes exacerbation episode include patients with a history of organ transplant or those diagnosed with cystic fibrosis. These patients have significantly different clinical courses that the episode does not attempt to risk adjust. Furthermore, there may be some factors with a low prevalence or significance that would make accurate risk adjustment difficult and may be used to exclude patients completely instead of adjusting their costs.

For the purposes of determining a quarterback's cost of each episode of care, the actual reimbursement for the episode will be adjusted to reflect risk factors captured in recent claims data in order to be fair to providers caring for more complicated patients. Examples of patient factors likely to lead to the risk adjustment of acute diabetes exacerbation episodes include a history of

congestive heart failure, kidney failure, or pregnancy. Over time, a payer may adjust risk factors based on new data.

## **MEASURING QUALITY**

The episode reimbursement model is designed to reward providers who deliver cost effective care AND who meet certain quality thresholds. A quarterback must meet or exceed all established benchmarks for any quality metric tied to gain sharing in order to be eligible to receive monetary rewards from the episode model. Other quality metrics may be tracked and reported for quality improvement purposes but may not be tied directly to gain sharing.

The quality metrics linked to gain sharing for the acute diabetes exacerbation episode are:

- Follow-up care: Percentage of valid episodes with follow-up care in the first 14 days of the post-trigger window (higher rate indicative of better performance).
- Diabetes counseling: Percentage of valid episodes with diabetes counseling during the episode window (higher rate indicative of better performance).

The quality metrics that will be tracked and reported to providers but that are not tied to gain sharing are:

- Readmission: Percentage of valid episodes with a relevant readmission in the post-trigger window (lower rate indicative of better performance).
- Emergency department (ED) visit: Percentage of valid episodes with a relevant ED visit in the post-trigger window (lower rate indicative of better performance).
- Intensive care unit (ICU) utilization: Percentage of valid episodes with ICU utilization in the trigger window (rate provided for comparison only).
- Medications: Percentage of valid episodes with diabetes-related medications in the post-trigger window (higher rate indicative of better performance).

- Computed tomography (CT) scan or magnetic resonance imaging (MRI)
  usage: Percentage of valid episodes with a CT scan or MRI usage in the
  trigger window (lower rate indicative of better performance).
- Length of stay: For inpatient-triggered valid episodes, the average length of stay of the triggering claim (lower rate indicative of better performance).

It is important to note that quality metrics are calculated by each payer on a per quarterback basis across all of a quarterback's episodes covered by that payer. Failure to meet all quality benchmarks tied to gain sharing will render a quarterback ineligible for gain sharing with that payer for the performance period under review.